

What is claimed is

1. An electronically commutable motor whose output stages are controllable by an electronic control unit, using PWM control signals, and are feedable from a supply voltage source,  
wherein, at least upon exceeding the nominal voltage ( $U_{\text{nom}} = 13 \text{ V}$ ) of the motor, the pulse width (ID) of the PWM control signals ( $\text{PWM}'_{\text{end}}$ ) for the output stages (EST) are reducible to a width (ID) that prevents overloading the motor and electronic components by limiting the motor output, as a function of the magnitude of the supply voltage ( $U_{\text{batt}}$ ) and the specified setpoint ( $\text{PWM}_{\text{setpoint}}$ ) for the PWM control signals.
2. The electronically commutable motor according to Claim 1,  
wherein the pulse width (ID') is reduced in linear or nonlinear proportion to the rising supply voltage ( $U_{\text{batt}}$ ) (Figure 4).
3. The electronically commutable motor according to Claim 1 or 2,  
wherein the pulse width (ID) is reduced at an increasing rate in proportion to the increasing specified setpoint ( $\text{PWM}_{\text{setpoint}}$ ) and rising supply voltage ( $U_{\text{batt}}$ ) (Figure 5).
4. The electronically commutable motor according to one of Claims 1 through 3,  
wherein the control unit (STE) is assigned a correction unit (KE) that delivers, to the motor output stages (EST), the PWM control signals ( $\text{PWM}_{\text{end}}$ ) for the motor output stages (EST) determined according to the specified setpoint ( $\text{PWM}_{\text{setpoint}}$ ), either unchanged or as reduced PWM control signals ( $\text{PWM}'_{\text{end}}$ ), as a function of the magnitude of the supply voltage ( $U_{\text{batt}}$ ).
5. The electronically commutable motor according to Claim 4,  
wherein the PWM control signals ( $\text{PWM}_{\text{end}}$ ) determined for the motor output stages (EST) by the control unit (STE) on the basis of the specified setpoint ( $\text{PWM}_{\text{setpoint}}$ ) may be forwarded unchanged to the output stages until reaching the nominal

voltage ( $U_{\text{nom}}$ ) of the motor, with the pulse width (ID') being reduced according to the setting provided by the correction unit (KE) only when the supply voltage ( $U_{\text{batt}}$ ) begins to increase.

6. The electronically commutable motor according to Claim 4 or 5, wherein the correction unit (KE) is integrated into the control unit (STE), which delivers the PWM control signals ( $\text{PWM}_{\text{end}}$  and  $\text{PWM}'_{\text{end}}$ , respectively) to the output stages (EST) of the motor (M) either unchanged or with a reduced pulse width (ID'), as a function of the magnitude of the supply voltage ( $U_{\text{batt}}$ ).

7. The electronically commutable motor according to one of Claims 1 through 6, wherein the reduction in the pulse width (ID') of the PWM control signals ( $\text{PWM}'_{\text{end}}$ ) for the output stages (EST) of the motor (M) takes place as a function of the speed (N) of the motor (M).

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